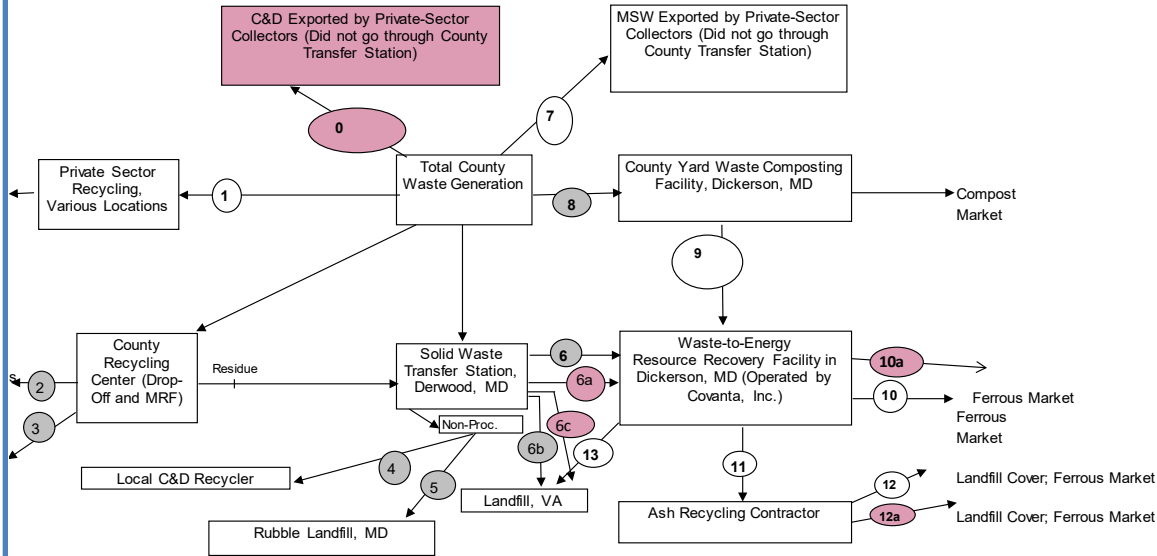


APPENDIX B

MATERIAL FLOW DIAGRAM AND RECYCLING CALCULATION: CALENDAR YEAR 2017

**MATERIAL FLOW DIAGRAM
Calendar Year 2017**



- 1, 7** Audited or otherwise documented. Often based on truck scales of others.
- 2** Data is from State-certified County truck scales Owned by County.
- 3** Data is from State-certified truck scales, privately operated under contract to County.
- 4** This color indicates C&D waste, which is not MSW, not eligible for recycling and is not to be included in recycling rate calculation.*

Total Waste Generation, Including C&D Exported by Private Sector	1,378,396
County-Managed Waste (CMW) = 1 + 2 + 3 + 4 + 5 + 6a + 6b+6c+ 7+ 8	1,236,740
MSW Generated (above less streams 4, 5 and 6a)	1,103,051

Material Description	Sources of Data	Total (tons/yr)	Comments
Construction & Demo Debris Private Export* (Recycled via non-County Facilities)	Licensed Collector Reports under ER 5-13AM	141,656	Not County-managed, includes both disposed and recycled C&D
County Recycling Facility Material Sales	Collector, Processor, Business & Self-Hauler Rpts	290,633	Filtered to avoid double-counting
Mulch Loaded Out From TS	County TS & MRF Scales, Outbound	78,492	Outgoing to market from County Recycling Center & Penn Was
Non-Processibles Recycled**	County Transfer Station (TS) Scale Records	29,009	Scaled out as taken to County Mulch Contractor & Preserve Lo
Non-Processibles Landfilled**	County TS Scale Out Records	41,584	Not included in MRA recycling calculation
Loaded on Rail to RRF (MSW burned)	County Trans. Stat'n. & Covanta Scale Records	14,937	Not included in MRA recycling calculation
Loaded on Rail to RRF (C&D Burned)	Covanta Scales as Loaded	502,199	Total tons loaded on rail to RRF Net of 6a
By-pass (Accepted Processible Landfilled)	County Transfer Station (TS) Scale Records	72,963	In-Bound C&D less Outbound Non-Processibles Landfilled
By-pass (Accepted Processible Landfilled) C&D	County TS Scale Out Records	28,942	MSW shipped to landfill
Refuse Disposed Out of County	County Transfer Station (TS) Scale Records	4,205	In-Bound C&D less Outbound Non-Processibles Landfilled
All Incoming Leaves and Grass	Audited 6-Mo. Hauler Reports	118,296	Private Sector MSW Collection not delivered to County TS
Composting Residue to RRF	Compost Facility & TS Scale Records	55,480	Includes 0 to Backup Composters
Ferrous recovered at RRF	MES Scale Records	-	Reported by Compost Facility Manager
Ferrous recovered at RRF (C&D Residue)	Covanta Scale Records	7,039	Recovered from ash at County Facility
Ash Loaded to Ash Recycling Contractor	Internal Calculation	1,023	Not included in MRA recycling calculation
Ash outgoing from Ash Recycler	Republic Monthly Report	178,756	Total ash (includes 12, 12a, and 13)
Ash outgoing from Ash Recycler (C&D Residue)	Republic Monthly Report	156,080	Included in MRA recycling calculation
All Ash not recycled	Internal Calculation	22,676	Not included in MRA recycling calculation
	Covanta Scale Records	-	

Montgomery County Recycling Rate and Waste Diversion Rate Calculations (MRA Method)				
		Numerator	Denominator	Rate
Recycling Rate	$(1 + 2 + 3 + 8 - 9 + 10 + 12) / (CMW - 4 - 5 - 6a - 6c)$	616,733	1,103,051	55.91%
Diversion Rate ***	$((1 + 2 + 3 + 8 - 9 + 10 + 12) / (CMW - 4 - 5 - 6a - 6c)) + 5.0%$	616,733	1,103,051	60.91%

* Construction and Demolition waste (C&D) is waste identified by place of origin - construction or land clearing sites. C&D is reported on licensed hauler reports, but there may be additional C&D tons not reported and therefore not included in stream 0.
 ** Nonprocessibles are Construction & Demolition-type materials: not eligible for recycling credit, but are County-managed solid waste.
 *** Diversion Rate = Recycle Rate + 5.0% Source Reduction Credit

Abbreviations:
 "C&D" means "Construction and Demolition" waste, exclusive of MSW, traditionally managed by the private sector, but much now comes to County TS.
 "CMW" means "County Management Waste". It includes all MSW, whether or not exported by private sector collectors, but only C&D delivered to TS.
 "MSW" stands for "Municipal Solid Waste", and represents the waste eligible for recycling under the State recycling law, regulations and guidelines.
 "TS" stands for the County's "Transfer Station", located in Derwood, Maryland, just south of Gaithersburg.
 "MRF" stands for Material Recovery Facility
 "RRF" stands for Resource Recovery Facility